2004 DOI Facilities and Asset Management Conference

MAXIMO™ Implementation Panel

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Panel Objectives:

- Identify unique initiatives
- Open your Bureau's "Toolbox"
- Share ***and use*** best practices

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Bureau of Indian Affairs, Irrigation, Power & Safety of Dam

John Anevski, P.E., Civil Engineer

BIA – Irrigation, Power & Safety of Dams

Maximo

- Currently for our Irrigation Projects and their dams
- 3 Projects on line
- All 16 projects to be on line in 4 more years

Irrigation Projects

- Irrigation maintenance
- Safety of dams maintenance
- Water orders
  - Ties in from billing software who paid
  - Will track which gate goes to which tract of land

Irrigation Projects

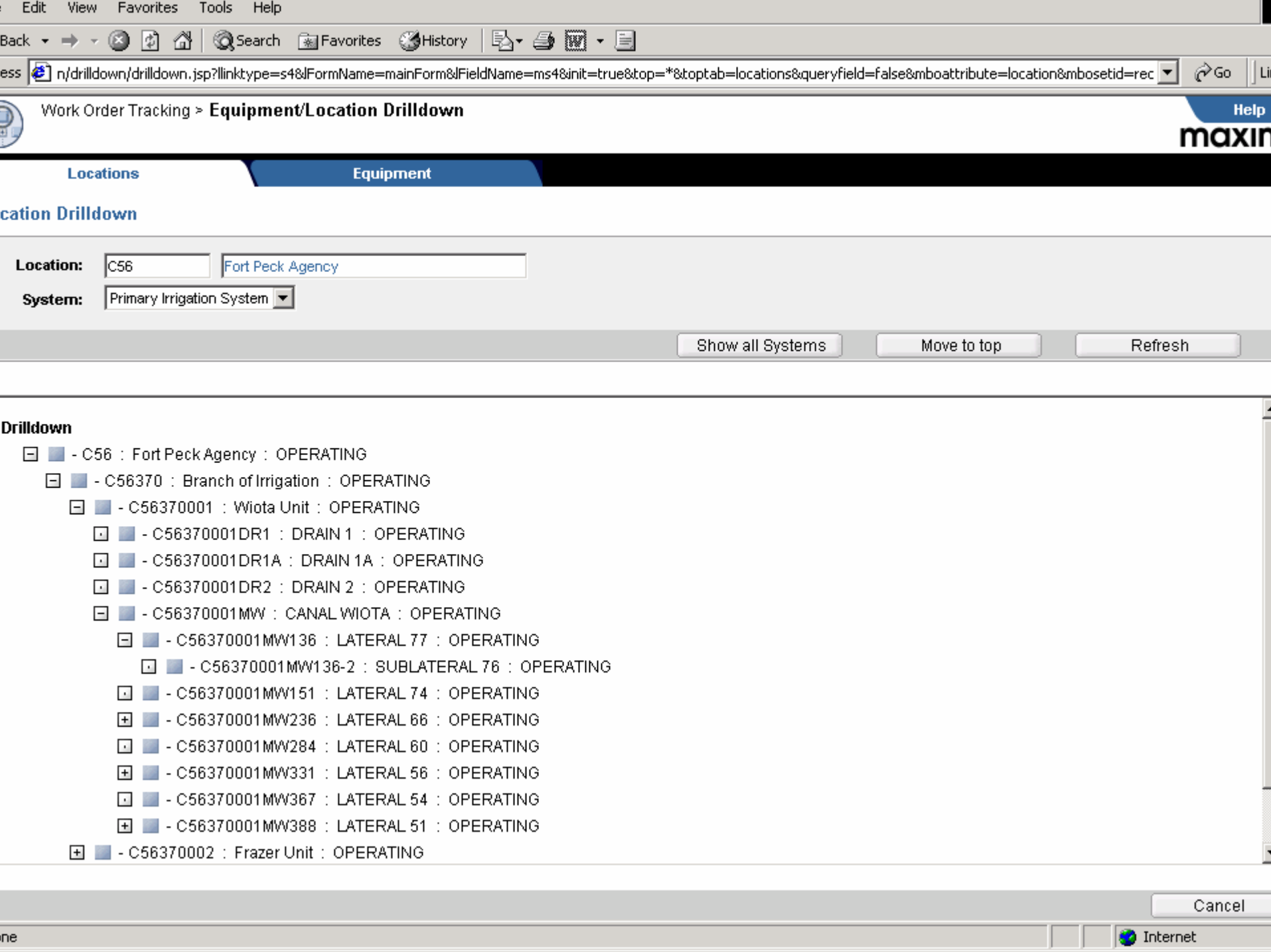
- Linear facilities (similar to roads) VS. Buildings & grounds.
- 1st, used GIS to map our projects (inventory) & then load data into Maximo (95%)
- Unique ID based on FFS Organization Code and distance down the canals

Problem:

- Finding a single structure out of 100 or more on a canal????

How Many Structures??

PROJECT	ACRES	DITCH MILES	STRUCTURES
Fort Peck	22,000	153	2,391
Wind River	55,000	414	7,592
Uintah	60,000	648	9,011
Wapato	150,000	769	10,279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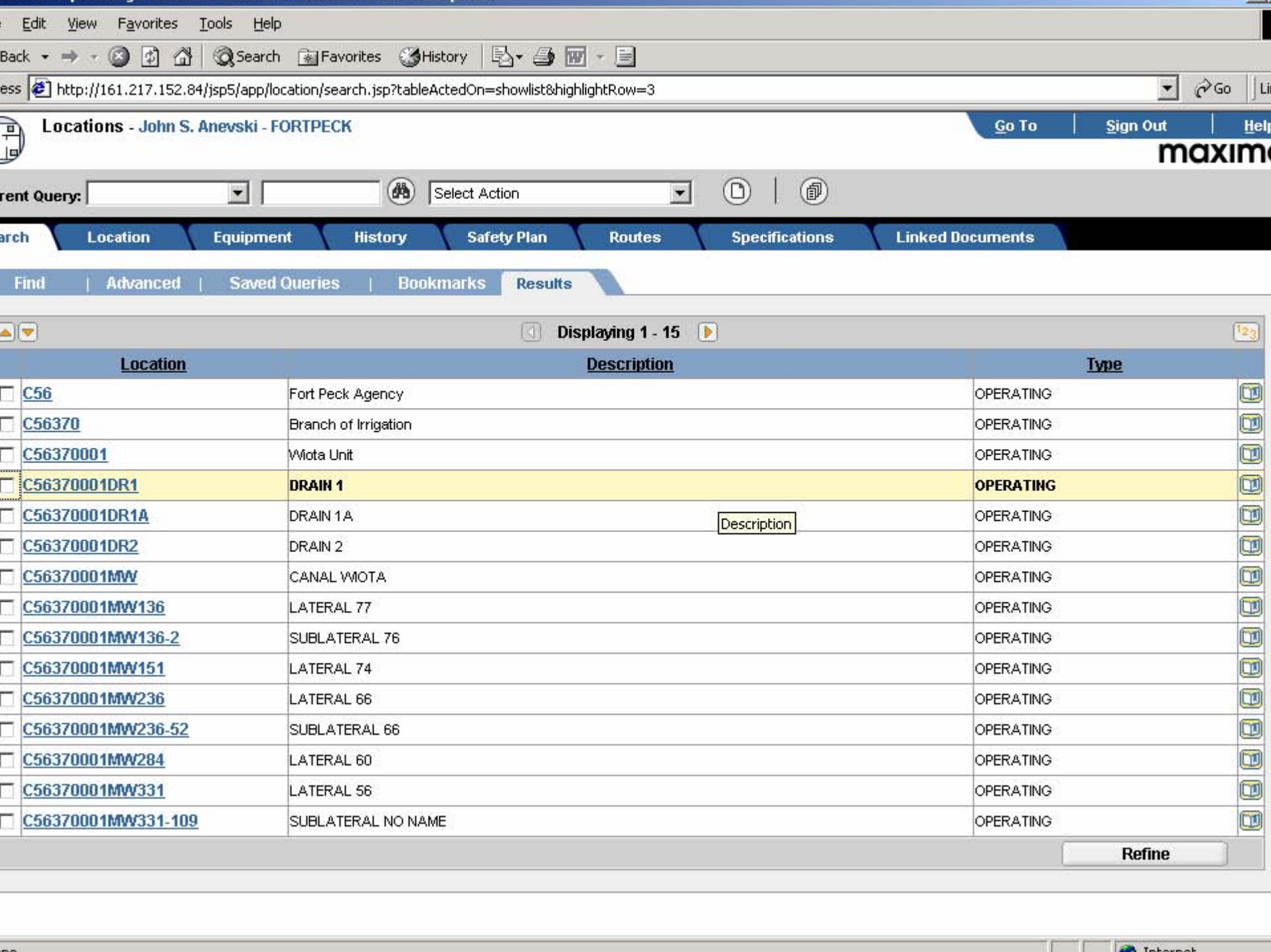
n/drilldown/drilldown.jsp?linktype=s4&FormName=mainForm&FieldName=ms4&init=true&top=*&toptab=locations&queryfield=false&mboattribute=location&mbosetid=rec
Go
Work Order Tracking > Equipment/Location Drilldown
Help
maxim
Locations
Equipment
cation Drilldown
Location: C56 Fort Peck Agency
System: Primary Irrigation System
Show all Systems
Move to top
Refresh
Drilldown
- C56 : Fort Peck Agency : OPERATING
- C56370 : Branch of Irrigation : OPERATING
- C56370001 : Wiota Unit : OPERATING
- C56370001DR1 : DRAIN 1 : OPERATING
- C56370001DR1A : DRAIN 1A : OPERATING
- C56370001DR2 : DRAIN 2 : OPERATING
- C56370001MW : CANAL WIOTA : OPERATING
- C56370001MW136 : LATERAL 77 : OPERATING
- C56370001MW136-2 : SUBLATERAL 76 : OPERATING
- C56370001MW151 : LATERAL 74 : OPERATING
- C56370001MW236 : LATERAL 66 : OPERATING
- C56370001MW284 : LATERAL 60 : OPERATING
- C56370001MW331 : LATERAL 56 : OPERATING
- C56370001MW367 : LATERAL 54 : OPERATING
- C56370001MW388 : LATERAL 51 : OPERATING
- C56370002 : Frazer Unit : OPERATING
Cancel
Internet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http://161.217.152.84/jsp5/app/location/search.jsp?tableActedOn=showlist&highlightRow=3
Go
Locations - John S. Anevski - FORTPECK
Go To
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Help
maxim
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Safety Plan
Routes
Specifications
Linked Documents
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Advanced
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Results
Displaying 1 - 15
Location
Description
Type
C56
Fort Peck Agency
OPERATING
C56370
Branch of Irrigation
OPERATING
C56370001
Wiota Unit
OPERATING
C56370001DR1
DRAIN 1
OPERATING
C56370001DR1A
DRAIN 1A
OPERATING
Description
C56370001DR2
DRAIN 2
OPERATING
C56370001MW
CANAL WIOTA
OPERATING
C56370001MW136
LATERAL 77
OPERATING
C56370001MW136-2
SUBLATERAL 76
OPERATING
C56370001MW151
LATERAL 74
OPERATING
C56370001MW236
LATERAL 66
OPERATING
C56370001MW236-52
SUBLATERAL 66
OPERATING
C56370001MW284
LATERAL 60
OPERATING
C56370001MW331
LATERAL 56
OPERATING
C56370001MW331-109
SUBLATERAL NO NAME
OPERATING
Refine

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ess http://161.217.152.84/jsp5/common/lookup/equipment.jsp?llinktype=s2&lFormName=mainForm&lFieldName=ms8 Go

Work Order Tracking > **Select Equipment**

Help
maxim

Search For:

arch Results

Displaying 1 - 20

Equipment	Description	Location
C56370001DR1:12580	ROAD CROSS-IN	C56370001DR1
C56370001DR1:12615	ROAD CROSS-OUT	C56370001DR1
C56370001DR1:19379	ROAD CROSS-IN	C56370001DR1
C56370001DR1:19430	ROAD CROSS-OUT	C56370001DR1
C56370001DR1:33	ROAD CROSS-IN	C56370001DR1
C56370001DR1:6936	ROAD CROSS-IN	C56370001DR1
C56370001DR1:6973	ROAD CROSS-OUT	C56370001DR1
C56370001DR1:85	ROAD CROSS-OUT	C56370001DR1
C56370001DR1A:6708	ROAD CROSS-IN	C56370001DR1A
C56370001DR1A:6767	ROAD CROSS-OUT	C56370001DR1A
C56370001DR2:0	ROAD CROSS-IN	C56370001DR2
C56370001DR2:16233	ROAD CROSS-IN	C56370001DR2
C56370001DR2:16278	ROAD CROSS-OUT	C56370001DR2
C56370001DR2:59	ROAD CROSS-OUT	C56370001DR2
C56370001MW:33027	DRAIN INLET	C56370001MW
C56370001MW:33090	LTURNOUT	C56370001MW
C56370001MW:33221	CHECK	C56370001MW
C56370001MW:33748	LTURNOUT	C56370001MW
C56370001MW:36	MISCELLANEOUS	C56370001MW
C56370001MW:36532	UNDERDRAIN	C56370001MW

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Work Order Tracking > **Select Equipment**

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C56370001MW:33748	LTURNOUT	C56370001MW
C56370001MW:36	MISCELLANEOUS	C56370001MW
C56370001MW:36532	UNDERDRAIN	C56370001MW

Microsoft Internet Explorer

1,867 rows found.

OK

Cancel

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Go

Map Manager - John S. Anevski - WAPATO

Go To | Sign Out | Help

maxim

Map Size: Medium | Select Action

p Manager | Work Request

Wapato Indian Irrigation Project

NW N NE

Legend

USGS Topo
Aerial Photo - Central
Reservation Boundary

Roads

Light Duty Road
Primary Hard Surface
Secondary Hard Surface
Unimproved Road

Ditches

AHTANUM
SATUS2
SATUS3
TOPPENISH-SIMCOE
WAPATO-SATUS

Structures

AIR VENT
BRIDGE
CHECK
CHECK/CROSS
CHECK/DROP
CHECK/DROP/CROSS
CHECK/WASTE
CHUTE

Map Laye

- [x] Reservati
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Boundaries
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- [ ] Lakes
- [ ] Large Str
- [ ] Streams
- [x] Roads
- [x] Ditches
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Click on map

Select map

- Identify
- Identify

Internet

MAXIMO/GIS Interface on Linear Structures.

- Talk on Wednesday
- May 5th 9:30 AM
- The 2nd talk under 7b

BIA – IPSOD – The End

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Bureau of Land Management

Chris Hamilton

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BLM Facility Asset Management Scope:

- **Asset Base**
  - Acres 262,000,000
  - Roads (miles) 82,000
  - Recreation Sites 2,100
  - Administrative Sites 700
  - Dams 800
  - Bridges 900
- **User Base**
  - Sites 2800
  - Field Offices 137
  - State Offices 12
  - Headquarters 1
- **Personnel** 917
  - Engineering Maintenance 559
  - Recreation Technician 358

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BLM Application of MAXIMO: FACILITIES

- Facility Asset Maintenance
  - Inventory
  - Work Orders
- Facility Asset Management
  - Budget Requests
  - Condition Assessment
  - Involvement of Recreation
    - Roads, Trails, OHV

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End User Priorities:

- Facilities Maintenance
  - Field Engineering/Maintenance Personnel
  - Field Recreation Personnel
- Budget
  - Washington Office
  - State Engineers

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BLM FAMS Phased Implementation:

Phase 1	Phase 2	Phase 3	Phase 4
May 03	August 04	September 05	TBD
▪ Inventory ▪ Reports	▪ Condition Assessment ▪ Deferred Maintenance Work Orders ▪ Est. Budget Modeling	▪ Validate Cost Models ▪ 'Discovery' & PM Work Orders ▪ Handhelds	▪ GIS ▪ Financial Links

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Unique BLM initiatives:

Annual Maintenance Budget Estimation
- Unit Cost Factors
- Location Cost Adjustment

Phased Implementation
- Scale to Workforce Capability
- Reduce Business Culture Shock
- Import Legacy Data

Bureau-wide Security Interface
- BLM Application Security System (BASS)

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It's not about the software:

- COTS must meet business requirements

It's all about the business process:

- Must understand business processes to configure MAXIMO

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The devil is in the level of detail :

PM Maintenance work load

- **Field Office with 50 Sites**
  - **Each site has 10 assets**
    - **Each asset has 1 Work Order with 10 tasks**

- **Tracking the PM maintenance:**

  50 Sites * 10 assets * 10 tasks =

  5000 items for 1 Office

- **Discovery and deferred maintenance work orders add to this work load**

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- **Questions are Cheap!**

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Bureau of Reclamation

Debra Lange
MAXIMO
Program/Project Manager

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Implementation of MAXIMO

- Replaced in-house developed systems that were in use since the 1970's
  - Power Operations and Maintenance Management System
  - Stores (warehouse system)
- Approved January 1995 (Version 2.1.1)
- First production site on line April 1997
- Completed upgrade to Version 4.0.1 in January 2000
- Version 4.1.1 in use since 2001

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Bureau of Reclamation

- Integrated system used to conduct Operation and Maintenance activities at 50 Reclamation facilities
  - Maintenance Management
  - Inventory Management

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Bureau of Reclamation

- Interfaces
  - FEDSTRIP
    - GSA/DLA Supplies Materials
      - Lumber, hardware, chemicals, lubrications, etc.
    - Corporate Data Warehouse
      - Labor, Cost Accounts, etc

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Bureau of Reclamation

- Used to collect costs of:
  - Federal and Non-Federal Labor
  - Supplies and Materials
  - Tools (Vehicles and Heavy Equipment)
  - Services (Contracts)

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Reclamation's MAXIMO
19 Separate Databases

- Hydro sites (Dams)
- Water sites (Pumping, River Maintenance)
- Administrative Offices (Inventory Management, vehicle/heavy equipment maintenance)

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Power Operations & Maintenance Checklist

- Used for Power O&M Reviews
- Access Database
- Contains all of Reclamation's installed power equipment identified on Power Reviews

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Power Operations & Maintenance Checklist – Cont'd

- Electrical Checksheets
- Mechanical Checksheets
  - Provides detailed information on associated Job Plans, Work Orders, etc.
- Date work was initiated and Date work was completed

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UPCOMING FEATURE

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FAILURE HIERARCHY

- Set of common failure codes
  - Problems
  - Causes
  - Remedies
- Breakdown of trends or recurring problems
- Reduce or limit asset failures in the future

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U.S. Fish and Wildlife Service

David Lemarie

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U.S. Fish and Wildlife Service
Maximo Operating Environment

- Includes over 700 geographically dispersed field stations
- Predominately small staffs where personnel perform numerous roles
- Many remote locations with limited Internet access

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Approximately $15 Billion in Assets

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Program Overview

- Maximo used in the two programs having the majority of Service Assets
- In-house approach to Program Management, System Administration and Training
- Used for all categories of maintenance (real property, personal property, and optional use for habitat/lands)

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FWS Unique Initiatives

- Custom application to track Certifications
- Cloned equipment and work order applications
- Evaluating 3rd Party tool for condition assessments, project development
- Using 3rd Party tools for screen editing and implementing business rules

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Implementation Overview:

- Centrally Funded
- Formal in-house training program
- Decentralized approach to how to implement based on local practices
- Used for all Service asset types
- Some functionality initially planned for Maximo will now be included in FBMS

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Implementation Schedule at a Glance

- Pilot tested v 4.1.1 in FY 02
- Converted to web based version in FY 03
- Implementation began in FY 03
- Upgrade to version 5.2 planned for FY 04
- Implementation to be completed in FY 05

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Current Challenges

- Enforcing business rules
- Program metrics/compliance
- Reporting and data analysis
- Constantly changing landscape
- Keeping users informed
- Overcoming resistance
- Management Involvement

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On the Horizon

- Integration with FBMS
- How best to address reporting and data analysis requirements
- Standardization within the department (PM's, asset codes, work types)
- Establishing Metrics and measuring program participation/success
- Link to maintenance funding/planning
- Link to Condition Assessment Process

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Typical reaction of field station personnel after being told they will be their station lead for implementing Maximo

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U.S. Geological Survey

Kathy Lawson

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US Geological Survey Facility Maintenance Management System

- National Operation and Maintenance Program
  - 13 Owned USGS Installations
  - Headquarters

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Modules:

- Equipment
- Locations
- Work Order Tracking
- Failure Codes
- Job Plan
- Preventive Maintenance

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Accomplishments:

- Defined Business Requirements
- Established four MAXIMO Environments
- Operational Testing environment initiated at the Headquarters facility
- Multi-site setup
- Equipment inventory
  - Approximately 2,555,000 sq. ft.

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Standardized in USGS:

- Equipment Inventory
  - GSA Nomenclature
  - Standardized Templates
  - GSA Job Plans for common equipment
- Building System Definitions

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Implementation Strategy:

- Evaluate accomplishments and next steps with customer.
- More Field Participation in contract development.
- Performance Based Fixed Price Contract.
- Evaluate the use of Work Flow
- Evaluate the use of handhelds with customers.

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Summary:

- Business Processes Defined
- Operational Testing Environment (WO Tracking)
- Equipment Inventory
- Standardization of Nomenclature, Building Systems and Job Plans.
- Beginning of a National Operation and Maintenance Program

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Lessons Learned:

- Impact to each Facility
- Provide overview of software prior to defining your requirements
- Take smaller steps
- Closely evaluate the risks associated with the contracting mechanism you are choosing

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National Park Service

Steve Maass